

What is claimed is:

1. A multiprocessing system comprising:  
multiple processors mounted on a single die; and  
multiple operating systems residing in a memory connected to said multiple processors,  
5 wherein each of said multiple processors executes an operating system of said multiple operating systems.
2. The system of claim 1, wherein said processors are operable to execute two or more of said multiple operating systems simultaneously.
3. The system of claim 2, wherein said multiple processors are connected to said memory via a bus to execute said multiple operating systems.
4. The system of claim 2, wherein said multiple processors are directly connected to said memory to execute said multiple operating systems.
5. The system of claim 1, wherein each of said processors executes a distinct operating system of said multiple operating systems.
- 20 6. The system of claim 1, further comprising multiple processor groups, wherein each processor group includes at least two of said multiple processors executing one of said multiple operating systems.

7. A multiprocessing system comprising:  
a plurality of processor groups mounted on a single die; and  
multiple operating systems residing in a memory connected to said groups, wherein each  
of said groups executes an operating system of said multiple operating systems.

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8. The system of claim 7, wherein each of said groups includes multiple processors.

9. The system of claim 8, wherein said groups are operable to execute two or more of said  
multiple operating systems simultaneously.

10. The system of claim 9, wherein said multiple processors in each of said groups are  
connected to said memory via a bus to execute said multiple operating systems.

11. The system of claim 9, wherein said multiple processors in each of said groups are  
directly connected to said memory to execute said multiple operating systems.

12. The system of claim 7, wherein each of said groups executes a distinct operating system  
of said multiple operating systems.

13. A multiprocessing apparatus comprising:  
processor means for executing a plurality of operating system means, wherein said  
processor means includes a plurality of processors mounted on a single die; and  
memory means for storing said plurality of operating system means.

14. The apparatus of claim 13, wherein said processor means is connected to said memory means via a bus to execute said multiple operating systems.

5 15. The apparatus of claim 13, wherein said processor means is directly connected to said memory means to execute said multiple operating systems.

16. The apparatus of claim 13, wherein each of said processors of said processor means is operable to execute a distinct one of said plurality of operating system means.

17. The apparatus of claim 13, wherein said processor means includes a plurality of processor group means, wherein each processor group means includes at least two of said plurality of processors.

18. The apparatus of claim 13, wherein said plurality of processor group means is operable to execute one or more of said plurality of operating system means.

19. The apparatus of claim 13, wherein each of said plurality of processor group means is operable to execute a distinct one of said plurality of operating system means.

20. The apparatus of claim 13, wherein said processor means is operable to simultaneously execute each of said plurality of operating system means.